

***Imperial County Office of Education
California K-12 High Speed Network***

*1398 Sperber Road
El Centro, CA*

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of:

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Modernizing the E-rate

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WC Docket No. 13-184

Program for Schools and Libraries

)

INITIAL COMMENTS BY:

**THE IMPERIAL COUNTY OFFICE OF EDUCATION / CALIFORNIA K12 HIGH
SPEED NETWORK**

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Executive Summary

The Imperial County Office of Education and the California K-12 High Speed Network (K12HSN) hereafter referred to as the K12HSN commends the Commission on its efforts to sustain and reform the highly valuable E-rate program. The E-rate program has served as the catalyst in providing access to schools and libraries across the nation. In California, school districts have had opportunities to expand their service offerings to students and implement administrative efficiencies over the last 16 years. The major undertaking of revising the program via the Notice of Proposed Rulemaking (NPRM) will offer schools in California and across the nation the opportunity to leverage the program as they strive to prepare our schools for 21st Century learning. Demand for program services has consistently outpaced available funding (\$2.3B) for several years and it is time to revisit the program, and to increase its funding cap to ensure that classrooms continue to move toward 21st Century instruction and support the ConnectEd initiative.

As the Commission moves forward with this NPRM, it is important to remain focused on the fact that E-Rate is a successful program and that any changes to the E-rate program should be focused on modernizing the program to meet the demands of schools and libraries as they prepare the 21st Century workforce. The program requires updates to its current structure. It is strained by increasing demand for E-rate-supported services as well as being persistently underfunded. Adequate funding is essential to improving the E-Rate program. The single most effective step the Commission can take to bolster the success of the E-rate program is to carefully assess the new needs and provide funding in an amount that is sufficient to keep up with current demand and 21st Century classroom needs.

In this document the K12HSN will offer comments on the 3 program goals listed in paragraph 12 of the Notice of Proposed Rulemaking (NPRM), which we believe will have the greatest impact on our state. These are:

1. Ensuring schools and libraries have affordable access to 21st Century broadband that supports digital learning;
2. Maximizing the cost-effectiveness of E-rate funding; and
3. Streamlining the administration of the E-rate program.

Throughout the comments in these three areas, we've broken them down in several themes that will be consistent with the following key recommendations:

1. The spirit of *access* to broadband should remain at the core of E-rate program and the Commission should take into consideration all the important elements to ensure students and educators have a positive experience with the use of these technology tools.
2. Promote the procurement of broadband solutions that are cost effective and have long-term sustainability.
3. Increase efficiency and transparency of the application process while at the same time reducing the burden to the applicants.
4. Ensure adequate funding aligns with the strategic investments made in our schools and libraries and that distribution of funding continues to support the most disadvantaged.
5. Encourage the alignment or at least coordination of all federal broadband efforts in order to enhance outcomes from each, i.e., Broadband Technology Opportunities Program (BTOP), Connect America, E-rate, etc.

Introduction

K12HSN is a state program funded by the California Department of Education. The California Department of Education competitively selected the Imperial County Office of Education (ICOE) as the Lead Education Agency and manager of the K-12 High Speed Network program. A consortium consisting of Imperial County Office of Education, Butte County Office of Education and Mendocino County Office of Education operates the K12HSN program.

K12HSN provides the California K-12 community with:

- Network Connectivity and Internet Services,
- Teaching and Learning Application Coordination, and
- Videoconferencing Coordination and Support.

The mission of the California K-12 High Speed Network is to enable educators, students and staff across the state to have access to a reliable high-speed network, which has the capacity to deliver high quality online resources to support teaching and learning and promote academic achievement.

To accomplish this mission, K12HSN administers K-12's participation in the California Research and Education Network (CalREN). CalREN is the high-speed, high-bandwidth statewide network of 14 high capacity network transit locations, and circuits linking to 72 K-12 aggregation locations called Node Sites. The network infrastructure is leveraged along with other education institutions such as the University of California, the California State University, the Community college system, and three participating private universities. CalREN is also linked to the national Internet2 network forming an advanced state and national "Intranet" for educational use. The Corporation for Education Networking Initiatives in California (CENIC), a public benefit corporation, provides network design, management and procurement services.

Network and Internet services to the 72 K-12 aggregation sites are extended to 82% (7,794) of schools, 86% (844) of school districts, and 100% (58) of county offices of education

in California, which provide direct service to over 5 million students. [See www.k12hsn.org/data/reporting]

Discussion

Goal 1: Ensuring Schools Have Affordable Access to 21st Century Broadband that Supports Digital Learning

Theme: Affordable Access - in response to paragraphs 17, 20 and 21

The exponential increase in use of mobile electronic devices on school campuses, and the anticipated continued growth of educational uses of them, is driving increased network usage. The future demand is not currently known and as new technologies emerge, the quality, reliability, and speed of these connections must meet the demand placed upon them by educational end-users. While students have access to the Internet at school, many do not have access at home. The Community Use Order in the Sixth Report and Order (2010) was made permanent which allows network usage beyond the school day for communities and represents a step forward in increasing access in areas that are underserved or unserved. Providing the resources that our students need to utilize their mobile devices is a special challenge for our state's rural and remote regions.

School and Library sites need adequate broadband capacity to meet the ever-growing demands. The Commission may want to explore the level of network utilization by applicants, the Commission can require the applicant to estimate and report their network utilization percentages as part of the revised application process -- perhaps in the second year of a multi-year application. Collecting this information will help USAC document the value of the program and provide the data needed by the Commission to predict future capacity demands and costs. However, in order for this information to be valuable to the Commission, and for the public at large (transparency), an online, publicly accessible system that is easy to use must be available.

A new USAC application management system will be critical to implement any changes to the E-rate program that are decided upon, and crucial to its success.

Theme: Funding Cap - in response to paragraphs 57 and 58

Total funding requests for the past two years have approached the \$5 billion level and we believe that this amount reflects an appropriate level of expenditures to meet the needs of applicants. Based on today's information and conditions, the funding cap should be increased to \$4 to \$5 billion in order to meet the proposed goals of the Commission and the administration goals of ConnectED.

In order to best accomplish the goals set by this NPRM, the Commission will need to increase revenues and re-bench the eligible services to ensure schools and libraries are able to procure the level of connectivity they need. Services that do not have direct impact on the learning process, such as cell service, website hosting, and directory services, should be deemed ineligible.

Theme: Service Priorities- in response to paragraphs 62, 63 and 64

Over its history, the E-rate program has funded a significant amount of infrastructure deployment. In California, this has enabled many school districts to procure broadband access to the school's door. In many cases, however, this same capacity does not transfer all the way to the classroom because of other required infrastructure that rarely gets support from the program due to the priority scheme in place and persistent underfunding of the program. This unfunded need for infrastructure within school sites becomes even more critical as the schools around the nation transition to the digital delivery model. An important example is adoption of the new common core state standards and computer adaptive assessments by many school districts around the nation through the Smarter Balanced Assessment Consortium (SBAC) and the Partnership for Assessment and Readiness for College and Careers (PARCC). Instruction and

assessment will utilize media rich resources (video, interactive digital textbooks, collaboration sites and media repositories). These are all available online and in some cases, hosted off premise. These services will be delivered in *real-time* and will require additional investments in hardware and high capacity connections in order to meet the demands of these digital age educational tools. Originally E-rate was intended to provide Internet access and the infrastructure to facilitate that access. In order to maintain the same spirit of guaranteed access (to the end-user, not the building), other components that are directly related to that access (i.e. wired and wireless infrastructure, network management tools, security, etc.) need to be reconsidered, deemed to be eligible services, and given a higher priority in funding. It is our recommendation that the Commission eliminates or restructures funding priorities to retool the classrooms. More specifically, services that do not have a direct impact in the learning process should be removed or phased out from the eligible services list, to include cellular services, web hosting, voice long distance and traditional voice lines.

While we understand these suggested changes may increase demand on the fund, the Commission may implement a phase in strategy by decreasing the discount percentage for applicants gradually in order to balance resources available versus demands. If applicants are guaranteed to be funded at least once every 5 years for site-based infrastructure, every applicant would have an opportunity and could sustain their infrastructure with support from the program.

The most important element of E-rate is to ensure access to adequate network capacity for schools and libraries that meet the 21st Century demand for education. So in the prioritization of funding, and determining eligibility, the need for access to these online resources to the end user--students and teacher-- must be met to the best of the ability of the program. This means that the wide area network (data lines), and Internet access are essential. The cabling and electronics to achieve wireless campus connectivity are equally important. It does not mean that

the other traditionally eligible services and components are not as important, but they may need to be looked at as secondary priorities to the higher priority items mentioned above.

Theme: Service Priorities- in response to paragraphs 67, 68, 69, 70 and 71

At this time, fiber connectivity is not an option for many smaller or rural schools and libraries in California due to the lack of infrastructure in remote locations. So there is not a "one-size-fits-all" solution that can be branded as the most effective technology architecture in the state of California (and other states). When rule changes permitted telecommunications providers to provision "dark" fiber to schools and districts as an eligible service, there was not a significant uptake in the provision of the new service for education because those same telecommunications providers have a better business case by providing turnkey services to include equipment and service (lit services) or the traditional leased telecommunications services.

While every applicants' situation will be different, the Commission should continue to support lit and dark fiber options. Applicants should be encouraged and incentivized to choose the best and most sustainable option available to them, and if possible offer a short term financial incentive if there will be long term cost savings to the program. (i.e. the ability for the applicant to build its own fiber network if the applicant has the ability to support and manage the technology; a criteria for this E-rate investment maybe a business case that proves it to be less expensive operations for both the applicant and the E-rate program after 5 years).

For rural locations that do not have geographic barriers for wireless solutions, those should continue to be eligible. Fiber optic technologies are the most desired approach, although for rural locations and where there are great distances between schools, fixed-wireless systems maybe the most cost effective approach at this time. We support the Commission in moving forward with a varied approach to broadband options that fit the needs of applicants.

Theme: Eligible Services - in response to paragraphs 90, 91 and 95

We support the Commission's desire to modify its rules to allow for greater broadband deployment within schools and libraries. Streamlining the Eligible Services List (ESL) will allow funds for broadband connectivity and infrastructure updates, but it will also aid in program simplification if ancillary services beyond basic access are no longer a part of the program. We support the immediate elimination of services that are not relevant today, such as paging and directory assistance, while transitioning others services that are still utilized, such as voice services, to a lower priority category (Note: It is assumed that the Priority 2 Category will receive funding based upon funds that are available after completing funding of the Priority 1 Category and there will be an increase to the overall funding of E-rate). We also believe that there are currently eligible services on the ESL that go beyond basic access to the Internet, such as web hosting and email service. These compete for limited dollars and should be removed from the ESL. Many schools across the nation already take advantage of no-cost email offerings such as Google and Microsoft.

For applicants that are currently under multi-year service agreements for services that might be removed, we encourage the Commission to grandfather those contracts without any allowable extensions and at their current funding level support. This will allow applicants to phase out funding or services in an orderly fashion. Long term changes to discount rates received by districts need to be determined well in advance of the funding year in which the change occurs.

Specifically, the discount percentage (the amount that each applicant must contribute) for Priority 1 (data transport and Internet access) should remain at similar levels, or have minor discount changes. Given that the demand for all priorities is reaching almost \$5 billion annually, it is understood that changes to the discount level for the Priority 2 services must occur based on this high demand. Therefore, for Priority 2 services, it may be necessary to cap the discount (i.e.,

at 75 percent as the highest discount level for Priority 2). Additional analysis will be needed to determine the ideal maximum level of funding for the E-rate program given the demand for Priority 1 services. Please note: Given the need for network capacity for 21st Century classroom tools, it is encouraged that the New Priority 1 services still have a discount level of 90% based upon school poverty levels.

In order to ensure that services that support instruction are paramount, we support a plan to move non-broadband type of voice services and other "ride over" services that are supplemental but not fundamental to broadband service, to a lower priority level. As an example, the migration of existing voice services to a lower priority status should meet both program (funding) needs, and applicant needs. We feel that while these services are important and relevant in today's schools and libraries, with advance notice and appropriate planning, they could be transitioned to a secondary priority with relatively little harm to applicants.

Theme: Educational Purpose - in response to paragraphs 99 and 100

K12HSN does not recommend that the "educational purpose" definition be modified further. The Commission clarified the definition of "educational purposes" in the Sixth Report and Order and has determined that schools must primarily use services funded by E-rate for educational purposes. With the changes made three years ago, we believe there is already clarity.

K12HSN believes all work undertaken by students and teachers is important and should use technology to promote efficiency and quality of service. Activities and efforts that support the instructional use of technology should be E-rate eligible. Access to high-speed broadband is the key for modernizing teaching by school and library staff members. Non-instructional centers that support schools and libraries should continue to be eligible so that activities undertaken by all staff employed by schools and libraries are eligible for the discounts. The Commission should take into consideration that further dissecting which facilities are instructional or not, adds to the existing burdensome application process and applicants should be relieved from this

constraint. Students and educators should expect the same level of service whether they are in an instructional or a non-instructional facility.

Theme: Basic Maintenance of Internal Connections in response to paragraph 101

Basic Maintenance of Internal Connections (BMIC) and other services should be accessible to all schools and libraries. Providing safeguards so that access and end-user experiences are reliable seems like a sound investment. There is a profound paradigm shift in network uptime from best effort to mission critical. There is a growing need for infrastructure to support the increased broadband capacity necessary for 21st Century instruction and assessment. It is important that funding for equipment, broadband access, and maintenance of those connections be continued. BMIC is currently available to only a few high discount applicants, which could result in disparate opportunities and can promote abuse of the program. The need for basic maintenance is critical, however adequate funding needs to follow. Once the funding increase has been determined for the overall program, then it could be determined how much will be available for basic maintenance. Given the program demand, it is also noted that the maximum amount of discount level for basic maintenance will need a cap below the current level of 90%. There are some recommendations that state 75% should be the maximum. More analysis is needed to determine this maximum level.

Theme: Discount Allocation Models - in response to paragraphs 103, 115 and 116

K12HSN strongly believes that the Commission should not head down the path of a per student funding allocation model since it will not have a positive result for the most disadvantaged populations such as the rural, remote and sparsely populated areas. If the “business case” could be made by the telecommunications providers to serve (and build infrastructure) in these areas, the service would exist already. In these types of locations, it doesn't, because the size of the market doesn't support the investment. Per-pupil funding would

exacerbate the digital divide in hard-to-serve areas as applications that are relatively small in the grand scheme fail to incentivize investments in infrastructure by service providers (even if there is an adjustment for rural locations systematically, it will never be able to account for all of the unique situations for the non-connected or hard-to-connect locations in our nation). Specifically our view of these issues can be summarized below:

- The funding model should not be changed to a per-pupil or per-site allocation; or any upfront type of funding model. The program has been very successful with a “needs” based request. In addition, it can be audited using this approach with service provider invoices and application documentation.
- The discount matrix should be revised to increase certain applicant's matching requirements for services.
- All applicants at some point in a 5-year cycle should have access to (current) Priority 2 type funds to help build the internal infrastructure needed to extend broadband service to the end-user. [Note: The band approach under which funding for Priority 2, happens first at the 90% discount rate, then at the 89% discount rate, then 88%, and so on those-- as described by some national E-rate groups -- is recommended. More information is available in the State E-rate Coordinators Alliance's (SECA's) Comments].
- We recommend that the Commission revise the program, by streamlining the application process and raising the funding cap, to make access to Priority 2 type funding available to disadvantaged applicants, at the minimum, once every 5 years (see other comments about funding in bands).
- We recommend funding on a district-wide basis as opposed to a school site basis.
- We recommend that the Commission maintain a distinction between urban and rural locations.

Theme: Funding & Funding Allocation - in response to paragraphs 129, 135, 140, 146, 149, 173 and 174

The Commission should shy away from per-pupil funding because it will not meet the needs of applicants since broadband costs are diverse across the nation. For example, in California, there are School Districts that have T-1 (1.5 Mbps) circuits that cost approximately \$1,800 per month in a rural area (with 12 students), and another urban area it costs \$179 per month (200 students). This helps illustrate that using the per pupil approach will exacerbate the gaps in broadband access. The Commission should strongly consider keeping the current *needs* based system approach, as it helps ensure equity of access issues are resolved for all schools that apply for funds.

The current approach used to distribute E-rate funding is working well. It has worked well in the past and acknowledges the differences in economy and location. We recommend the Commission evaluate adjustments to the current system and improve upon it rather than a transition to an entirely different method of allocation.

Theme: One-time funds - in response to question 173

In the particular case of California, one-time funds would present opportunities to provide assistance in closing connectivity gaps in isolated areas and through difficult terrains. As an example, the California Advance Services Funds supports projects that provide broadband services to areas with no, or very limited broadband access, through one-time funds available to telecommunication carriers. The Commission should consider a similar mechanism that is specific to the needs of eligible applicants and promote long-term cost savings and sustainable benefits to the program.

Schools and libraries need to have the ability to maintain their Internal Connections by accessing Priority 2 type funding at least once every 5 years. In this way they will be able to keep their infrastructure updated and ready for the increasing capacity when needed.

The funding requests for the past 2 years have approached the \$5 billion level and we believe that this \$5 billion funding in requests may be good baseline to start based on the proposed goals of the Commission and the administration's goals of the ConnectED initiative. Appropriate levels of funding will require additional analysis and alignment with what services will be funded and in which priority. Nevertheless, we have to remember that when E-rate was started in 1997, the mode of online access was a mixture of earlier technologies, and not broadband, i.e. dial-up. We are now faced with student and teacher need for robust, interactive learning tools. This type of service, as opposed to the access that met the needs in 1997, wholly supports the rationale of increasing the E-rate funding to a significantly higher level, i.e., \$5 billion.

Goal 2: Maximizing the Cost Effectiveness of E-rate Funds

Theme: Connectivity Metrics - in response to paragraphs 22, 23 and 24

K12HSN recognizes that connectivity metrics or goals will be important as indicators of success. While there have been some organizations that have proposed reasonable aspirational goals such as 1 Gbps to most schools within 5 years, we need to recognize that capacity required by the applicant is multidimensional and driven by how they use the tools in the learning process. There are very progressive school districts in California that make extensive use of the network as a result of their mobile device initiatives, cloud computing, video conferencing and access to media rich resources and learning objects. For those applicants, the 1 Gbps connection may not be adequate. The Commission should consider these goals as good indicators, but should recognize that every applicant is unique and will have different bandwidth requirements even

when similarly sized. Because technology changes so rapidly, if goals are based on connection speeds, they will quickly become stale. We recommend that the Commission set forth utilization parameters or guidelines on when it's appropriate to increase capacity and when it isn't. As an example, if a school connects to their district office at 100 Mbps and they are reaching 60% capacity, in this scenario it's likely the applicant needs increased capacity using program funds in the next application cycle. If the utilization of this connection were below 30% of the available capacity, then increasing capacity would not be warranted, unless the higher bandwidth had a lower annual cost. [Note: Lower costs for higher bandwidth services were realized when moving our state network locations from DS3 (45 Mbps) circuits to 1 Gbps connections.

(K12HSN, *2007 Technology Refresh Plan*, 2007, El Centro, CA,

<http://www.k12hsn.org/files/reports/TRPfinalv4.pdf>)]

Theme: Broadband Connections - in response to paragraphs 67, 68, 69, 70 and 71

The Commission should encourage applicants to seek connectivity solutions that have (1) low operational cost; (2) scalability and flexibility; (3) integration with a larger aggregation model, and; (4) long-term sustainability. While many agree that fiber optic cable fits nicely with the description above, the reality is that fiber optic is not available at all places or not cost-effective. In some cases, due to the difficult terrain and lack of middle mile infrastructure in certain parts of the state, some applicants may never have access to fiber optic. Service providers have no economic incentive to invest in these isolated areas, or have not discovered ways to create the economies of scale needed to make the sound investments. Several school districts in California have leveraged on other technologies such as fixed terrestrial wireless solutions, specifically in areas with challenging terrains such as crossing large bodies of water or where there are mountains in between locations.

Traditionally applicants have designed their networks to maximize their funding opportunity through the E-rate program. In some cases, this may not be optimal; broadband

connectivity's role is changing from best effort to mission critical. We encourage the Commission to allow applicants to implement best practice network design as recommended by industry standards. Specifically, it would allow applicants to design their networks to provide the best uptime possible within reasonable parameters. While there are technical solutions to implement resilient private networks, many applicants shy away from these approaches due to E-rate program limitations such as not funding applicant designed/implemented networks without using a vendor. In our experience, there are successful technical designs that are industry proven and that allow maximum system uptime with minor incremental costs.

Theme: Discount Rates - in response to paragraph 117, 122 and 126

K12HSN supports the requirement that all schools and libraries within a school district submit applications at the district level and use the average discount rate for the entire district. This will help to reduce the complexity of the program, and make the demand on the program more predictable. There have been proposals to help with equity of access to E-rate funds for Priority 2 type services. By using the district's average discount rate, it would allow USAC to potentially fund Priority 2 applicants in “bands” of discount percentages. This would result in greater predictability for the applicant related to when they may receive funding for their Priority 2 type services.

As an example, K12HSN recommends that, as changes to the discount matrix (to require districts to contribute a higher share of their E-rate-eligible services costs) are considered, the Commission should adjust down to 75% as the highest discount rate for Priority 2 type services, and keep the Priority 1 highest discount rate static at 90%. This has an immediate appeal from an E-rate funding perspective, and also requires districts and libraries to demonstrate commitment to securing the services requested. However, just as mentioned before, if this is done, applicants will need a planning period. In addition, small rural districts in California would have great difficulty meeting the higher matching requirement. If the matrix is changed,

the Commission is encouraged to establish that new Priority 2 discounts do not exceed the 75% discount level. For the new Priority 1 services, it should remain at 90% discount level, especially for rural schools and libraries. Certainly, additional analysis will be required to determine such percentages.

Theme: Aggregation pricing - in response to paragraphs 189 and 190

In California, K-12 schools enjoy the advantage of leveraging resources in aggregate across K-12 and along with other education institutions. Absent state funding and bulk purchasing of services, it would be difficult and cost-prohibitive to provide the level of service to every region of California. If school districts were left to fund Internet access on their own without benefit of the K12HSN, there would be cases in which districts would be unable to obtain service. Advances toward equal opportunity and distance learning for teachers and students would be lost or made unattainable. Critical business functions of schools would be jeopardized, along with a variety of professional development opportunities and student programs. Without a coordinated, state-funded initiative ensuring equal-access to cost-effective network services, students, teachers, and administrators throughout California schools will have disparate access and students will have and continue to have unequal opportunities.

The Commission should encourage applicants to utilize consortium applications where they can build economies of scale. In addition to leveraging buying power, in many cases there will be the additional advantage of being able to participate in Research & Education (R&E) networks in their respective states.

Goal 3: Streamlining the Administration of the E-rate Program

Theme: Streamline the Administration - in response to paragraphs 45 and 46

Streamlining the application process should be a top priority for the Commission. The current program has fallen short in its efforts to reduce paperwork and simplify the workflow. In too many cases, services are denied as the result of errors by either the applicant or by staff of the USAC. In the case of a denial of funding due to an error by the USAC, the only recourse for the applicant is to appeal the decision to the Commission. Increasing the simplicity and transparency of the application submission and review process are all needed. Additionally, transparency introduces efficiency and assists applicants with ready access to information concerning the stage of processing of their application.

Much attention has been focused on the volume of applicants that hire consultants to handle the applicant's E-rate process, and on the amount of money earned by these firms. Expansion of services offered by E-rate consultants is directly related to the complexity of the program, and the severe consequences that flow from even minor clerical errors, as the program exists today.

Theme: Performance Measures to Streamline Administration - in response to paragraphs 47 and 49

The key to successful transformation of the E-rate program into a highly effective one is transparency. If the application process were visible to applicants via an online portal through which applicants could learn what steps are complete and what steps are still ahead, and through which applicants could respond to inquiries quickly (in order to keep the forward progress of their applications unimpeded), the measurement of success would be self-reported. This transparency would offer an opportunity to shift the culture within the USAC administration

toward one of consistency in the application approval process, and help ensure that applicants can monitor and seek support as needed throughout the approval and payment process.

One of the foundational issues with the E-rate program is that there is a lack of clear documentation that defines the entire process or assists in successful navigation through the program. There are guides with regard to completion of specific forms, but no centralized document that offers background, enlightenment on how practices and protocols were developed, or any guidance on how decisions are made inside the administration. In practice, applicants have to ask for guidance, then act upon the guidance, then be prepared to prove that you received that guidance from USAC -- oftentimes only to learn that the answer you received was not definitive and another staff member will answer the same question differently. The result in these scenarios is that applicants are delayed or denied their funding and eventually decide to hire a consultant that spends 100% of their time navigating the system.

Theme: Reporting Requirements - in response to paragraph 193

To request basic information on the end result of work completed by E-rate funds is a reasonable expectation. The specific forms, i.e., Form 472, will need to be reviewed to ensure that the data is being collected in a manner that benefits the overall reporting of the E-rate program. As mentioned in another area of our response, it is recommended that a focus group made up of E-rate subject experts to include applicants from various size schools and libraries, be formed to propose specific and detailed options in these areas of recommended change.

At a minimum, the Commission should have a good understanding of the existing capacity procured by applicants and report the usage information about this capacity. Applicants should be given clear performance metrics that need to be collected and reported to keep the minimum safeguards in place and promote transparency in the process. To lessen the burden on applicants, the Commission may consider collecting some of this information through the reporting process and reserve the right to request additional supporting information if required.

In the current state of forms, this can be kept simple by adding a few key fields on the form 471 Funding Request's, i.e. approximate current bandwidth utilization range and anticipated growth in next 12 months (in MB), etc.

Theme: Complexity Reduction and Operational Efficiencies in response to paragraphs 224, 226, 229, and 233

The Commission should work with key stakeholders to improve the process and streamline the applicants' work, in eligibility of services, and in how the funding and payment processes take place. The key to these changes will be:

- Ease of use (applicant friendly).
- Provide end-to-end workflow from the bidding process, vendor selection, discount calculation, audit process, funding decision, reporting, etc.
- Offer transparency through the entire process.

In addition, the new E-rate application system should be planned to have flexibility, and should offer a portal for applicants as described in the NPRM and by other national groups. We recommend the Commission consider utilizing a single page form on which the applicant can confirm that the data from last year still applies since the district is in a multi-year contract. This single page can be submitted for USAC review.

As the Commission follows through with the recommendations of the NPRM, retooling the system to implement these changes will be critical. We encourage the Commission to form a focus group of key stakeholders (with subject expertise) to provide input through this process such as small and large applicants (to include consortia) as a new system is developed. This will help ensure that the new system will be applicant friendly and address the practical issues that arise for users.

Another key point to consider in this new application system should be designed to assist Program Integrity Assurance (PIA) team in their review process. A correctly designed

application system will help in the timely exchange of the appropriate information for both USAC and the applicant. Applicants throughout the program and in California have significant delays in the decision on the funding of their application. As a recent example, approval for the California statewide network application occurred well past the close of the funding year (approximately 3-4 months into the new funding application cycle). These delays cause significant cash flow issues for applicants, and delays in implementation of technology that are critical for each school year's planning and education. This system could also work to have a back end payment system that allows the applicant to approve payments to vendors, after a verification process of the services received. These unnecessary delays introduce other procurement challenges such as outdated equipment or service offerings by the time funding decisions are made. Applicants then have to file for service substitutions, which increase the burden to both USAC and the applicant.

Theme: Funding Extensions for Applicants - in response to paragraphs 237 and 242

We encourage the Commission to continue issuing extensions when they are requested. An extension gives the applicant one additional week of time during which they may need to engage with their service provider or other parties for verification. This additional week can make the difference between responses being accurate or inaccurate which can affect the funding decision in a negative way. If so, the applicant would submit an appeal and extend the process unnecessarily, and also burden the appeal process and system with unnecessary appeals. The Commission may want to consider revising the extension windows based on the type of inquiry or clarification required by the reviewer. Requests will vary in degree of complexity and there should be some flexibility in the opportunity to respond adequately.

We encourage the Commission to adopt rules that would allow USAC to make funding commitment decisions for multi-year contracts. Applicant certifications that acknowledge that the funding commitments are contingent upon funding that will be available in subsequent years

of the contract. The analysis behind this has to do with telecommunication costs decreasing as the terms in years increase. In our experience, technology changes rapidly and if applicants are allowed to enter multi-year agreements, it allows them to review current market prices, and make adjustments accordingly. It should be pointed out that in different areas of California (such as the northern part of the state and through the Sierra Mountains) and other states, there is a true deficit in fiber facilities. In order to attract telecommunication providers that are making large investments to serve those schools, multi-year contracts in combination with one-time funding opportunities can serve as a catalyst and improve the opportunities to bridge existing gaps.

Conclusion

Access to reliable, cost-effective and scalable broadband is imperative for the nation to maintain its competitive advantage. Connectivity levels the playing field for so many schools and libraries and provides the much-needed tools to incentivize innovation, learning and preparing students for a bright future. Finally, we commend the Commission for taking this important step and encourage it to take bold action in this unique opportunity to modernize the program.

Respectfully,



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